Remarks

Claims 1-28 are pending. Claims 1, 4, 5, 11-13, 16, and 22-28 have been amended.

Rejection of Claims under 35 U.S.C. § 102/103

Claims 1-5, 8, 13-16, 19, and 24-28 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Mor et al., U.S. Patent Application Publication No. 2002/0018481 (Mor) and RFC 2892, which is incorporated by reference in Mor. Claims 6, 7, 9, 10, 17, 18, 20, and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Mor in view of Ebersole, U.S. Patent No. 4,982,400. Claims 11, 12, 22, and 23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Mor in view of Ebersole, and further in view of in view of Friedman, U.S. Patent No. 5,949,788 The applicants respectfully traverse in part these rejections.

Regarding independent claims 1, 24, and 27, the applicants respectfully submit that Mor and RFC 2892, taken alone or in combination, neither teach nor suggest a method of initializing a node in a network including:

> . . . setting a locally significant ring identifier for each of the first and second rings without concern for the ring identifier established by any other node in the network for either of the two rings . . . [and]
>
> determining routing decisions for one or more packets received at the node along each of the first and second rings using the locally significant identifiers associated with a node that sent the packets.

as required by previously presented independent claim 1, and generally required by previously presented independent claims 24 and 27.

More specifically, regarding the claimed "setting a locally significant ring identifier," the Examiner states:

> . . . FIG. 1 of Mor; wherein the ring is attached locally to nodes A-D and the ring identifier is significant only to those attached nodes and insignificant to the other nodes attached to the Subnet . . . page 15, section 4.2.2 of RFC 2892; wherein each node sets a ring indicator value of 0 or 1 to the usage packet, control packet, and topology packet after the Time to Live (TTL) field without concern for the ring identifier established by the other nodes . . . (Final Office Action of March 14, 2005, p. 3)

As previously noted by the applicants, although Figure 1 of Mor does label each of the four nodes **22** with a different letter A-D, nothing in the figure and nothing cited by the Examiner teaches or suggests "setting a locally significant ring identifier." Moreover, there is nothing taught or suggested in Mor that supports the Examiner's contention that "the ring identifier is significant only to those attached nodes and insignificant to the other nodes attached to the Subnet," and the Examiner points to no such portion of the reference.

As for the portion of the claim limitation requiring setting identifiers "without concern for the ring identifier established by any other node in the network for either of the two rings," the Examiner's reference to RFC 2892 fails to teach or suggest the limitation. Section 4.2.2 (which falls under Section 4.2, "Generic Packet Header Format") states:

> 4.2.2. Ring Identifier (R)
> This single bit field is used to identify which ring this packet is designated for. The designation is as follows:
>
> TABLE 1. Ring Indicator Values
> Outer Ring 0
> Inner Ring 1

Thus, section 4.2.2 merely describes aspects of the packet header, and how it indicates on which ring a packet is traveling. Nothing is taught or suggested about the manner in which a locally significant ring identifier is selected at a node in a network.

In response to this line of argument, the Examiner states:

> [I]f there are two rings attached to each node in the network, each ring has to have an identifier set to it . . . .By citing 'the ring identifier is significant only to those attached nodes and insignificant to the other nodes attached to the Subnet" the Examiner is stating a fact that need not be shown or explicitly spell out. Anyone of ordinary skill in the art would understand that the ring identifiers are only used by the nodes connected to the ring network, meaning that the ring identifiers are only significant to the nodes connected to the ring network in making the decision of which ring to direct the packet, and the other nodes not connected to the ring network finds the identifiers useless for it does not serve the other nodes outside of the ring network any purposes. (Final Office Action of March 14, 2005, p. 18, bottom through p. 19, top)

Again, the applicants respectfully submit that Mor does not support the Examiner's proposition. Moreover, whether or not the Examiner is correct in stating "[a]nyone of ordinary skill in the art would understand that the ring identifiers are only used by the nodes connected to the ring network," that is irrelevant with respect to the applicants' claim. As noted above, claim 1 clearly requires setting a *locally significant* ring identifier for each of the first and second rings *without concern for the ring identifier established by any other node in the network for either of the two rings*. The Examiner clearly misapprehends the meaning of the claim terms. That a ring identifier is locally significant means that it is locally significant to the node, not the ring of nodes.

Nevertheless, and in an effort to advance the prosecution of the present application, the applicants have amended claims 1, 24, and 27 to further clarify this point. The applicants respectfully submit that none of the cited references, taken alone or in combination, teach or suggest these claims as amended. Additionally, as previously noted, the cited references fail to teach or suggest determining routing decisions . . . using *the locally significant identifiers* associated with a node that sent the packets.

Regarding independent claims 4, 25, and 28, the applicants respectfully submit that Mor and RFC 2892, taken alone or in combination, neither teach nor suggest a method of initializing a node in a network including:

> determining a ring identifier for each of the first and second rings coupled to the node after connection . . . [and]
>
> determining routing decisions for one or more packets received at the node along each of the first and second rings using the ring identifier information.

as required by previously presented independent claim 4, and generally required by previously presented independent claims 25 and 28.

Regarding the claimed "determining a ring identifier," the Examiner refers to paragraph 0029 of Mor which states:

> FIG. 1 is a block diagram that schematically illustrates an IP ring network 20, in accordance with a preferred embodiment of the present invention. Network 20 comprises nodes 22, which are connected by links 24 labeled

> S1 through S4. Each node can communicate with every other node over either a clockwise ring 26 or a counterclockwise ring 28 around the ring, indicated respectively by arrows adjacent to node A. Following SRP convention, these two paths are identified respectively as an outer ring and an inner ring, each of which is made up of ring segments corresponding to the physical links between the nodes. Typically, each of the nodes also links the ring to a respective subnet, which may be of substantially any topology known in the art. When node A, for example, receives a data flow from its respective subnet, which is destined for the subnet of node C, node A determines whether to transmit the flow over ring 26 or ring 28, using the method described hereinbelow.

The applicants respectfully disagree.

While the referenced paragraph does describe the links between nodes as being labeled S1 through S4, and indicate that rings identified respectively as an outer ring and an inner ring, Mor neither teaches nor suggests the operation of determining a ring identifier for each of the first and second rings coupled to the node after connection.

In response to this line of argument, the Examiner states: ". . . Mor teaches it in paragraph [0029] where Mor identifies the rings as inner and outer rings." Final Office Action of March 14, 2005, p. 20, top. Thus, the applicants submit that the Examiner has not fully addressed their argument. Again, the applicants respectfully submit that the fact that paragraph [0029] indicates that rings are identified as inner and outer does not each or suggest the claimed operation. Nevertheless, and in an effort to advance the prosecution of the present application, the applicants have amended claims 4, 25, and 28 to further specify the process of selecting a ring identifier. The applicants respectfully submit that none of the cited references, taken alone or in combination, teach or suggest these claims as amended. Additionally, claims 5 and 11-13 have been amended to include language in accordance with the amendment to claim 4.

Regarding independent claims 16 and 26, the applicants respectfully submit that Mor and RFC 2892, taken alone or in combination, neither teach nor suggest a method of initializing a node in a network including:

> determining a ring identifier for each of the first and second rings coupled to the node after connection;

> generating a ring query packet that includes a proposed ring identifier for one node . . . [and]

as required by previously presented independent claim 16, and generally required by previously presented independent claim 26.

Regarding the claimed "determining a ring identifier," the Examiner presents no specific argument, but as noted above the applicants respectfully submit that this limitation is neither taught nor suggested by Mor. However, as in the case of claims 4, 25, and 28, the claims have been amended.

Regarding the claimed "generating a ring query packet that includes a proposed ring identifier for one node," the Examiner refers to paragraph 0004 of Mor and states:

> . . . wherein the topology packet is the ring query packet that each node generate and send to each other nodes on one of the rings. Each topology packet includes a bit field for the ring identifier. (Final Office Action of March 14, 2005, p. 7, ¶1)

The applicants respectfully disagree. While Mor and RFC 2892 both refer to ring topology discovery techniques, neither teach nor suggest that the packet include a proposed ring identifier for one node, as required by the applicants claims. Moreover, the discussion of section 4.2.2 of RFC 2892 above makes clear that the bit described in that section does not satisfy the claim limitation. Accordingly, independent claims 16 and 26 are allowable over the cited references. Note that claims 22 and 23 have been amended to include language in accordance with the amendment to claim 16

Claims 2 and 3 depend from claim 1 and are allowable for at least this reason. Claims 5-15 depend from claim 4 and are allowable for at least this reason. Claims 17-24 depend from claim 16 and are allowable for at least this reason.

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA, 22313-1450, on July 14, 2005.

Attorney for Applicant(s) — Date of Signature: 7/14/05

Respectfully submitted,

Marc R. Ascolese
Attorney for Applicant(s)
Reg. No. 42,268
512-439-5085
512-439-5099 (fax)